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(71) Applicant(s)
Illuma Lighting Ltd
(Incorporated in the United Kingdom)
24-32 Riverside Way, Uxbridge, Middlesex, UB8 2YF, United Kingdom

(72) Inventor(s)
Jonathan Marsden

(74) Agent and/or Address for Service
Saunders & Dolleymore
9 Rickmansworth Road, WATFORD, Herts, WD1 7HE, United Kingdom

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(56) Documents Cited
US 5951151 A **US 5934788 A** **US 5562343 A**
US 5130914 A **US 4745533 A**

(58) Field of Search
UK CL (Edition R) **F4R RFP RFT RMG**
INT CL^7 **F21S 8/02 , F21V 19/02 21/04 21/30**
Online: PAJ, EPODOC, WPI

(54) Abstract Title
Pivotally mounted recessed light

(57) A recessed light comprising a generally cylindrical housing (1, Fig. 1) adapted to fit into an opening in a support structure such as a ceiling (C, Fig. 1) and a bezel rim 2 adapted to support a lamp 5 and to be removably received in the housing. The bezel rim includes a window 4 and support means for supporting a lamp on one side of the window. The support means is pivotally mounted on the bezel rim about an axis spaced between the window and a lamp supported by the support means. The support means may comprise a pair of spring clips 7 adapted to releasably engage the rim 13 of a lamp 5. Elastomeric seals may be provided between the housing and the ceiling, between the bezel rim and the housing and between the bezel rim and a glass disc (15, Fig. 1) which may be mounted in the bezel rim.

Fig 2

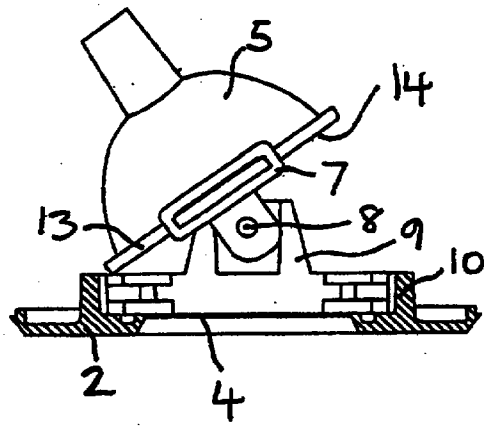

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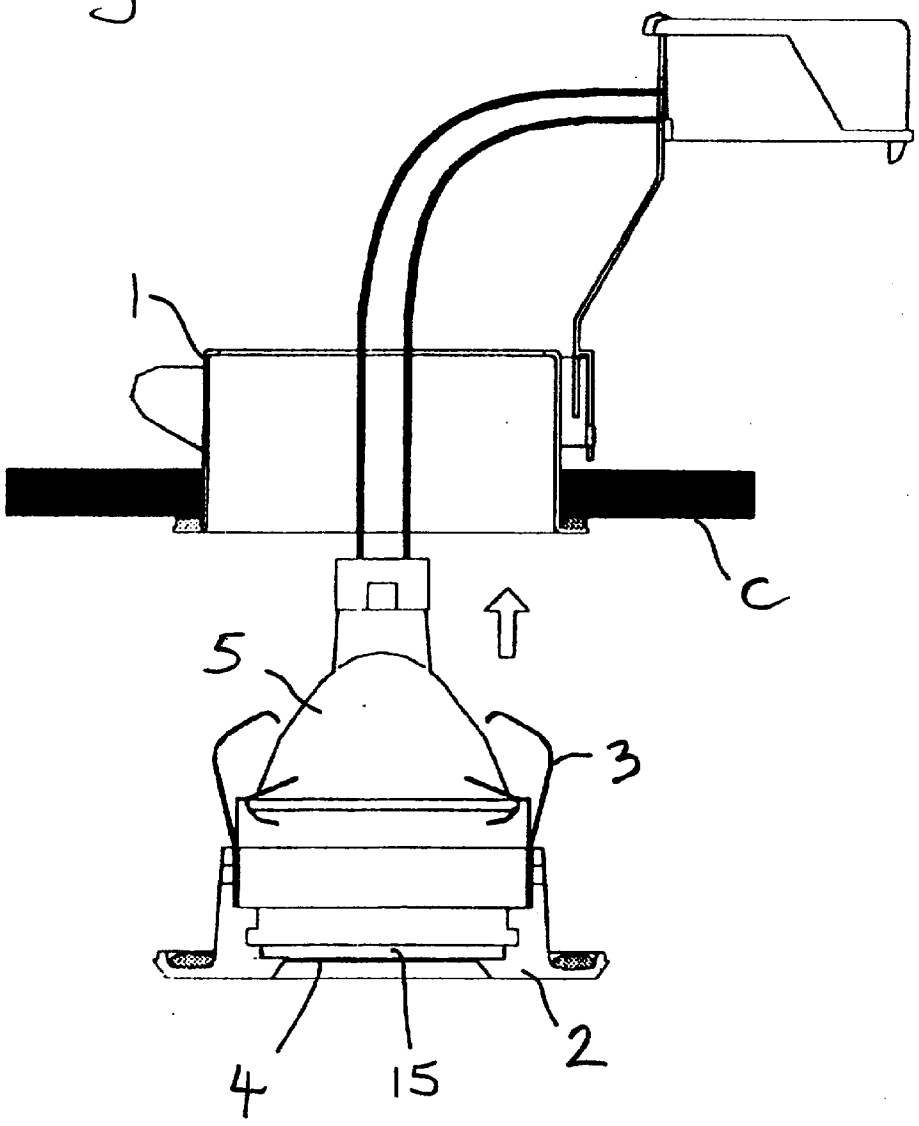
Fig 1



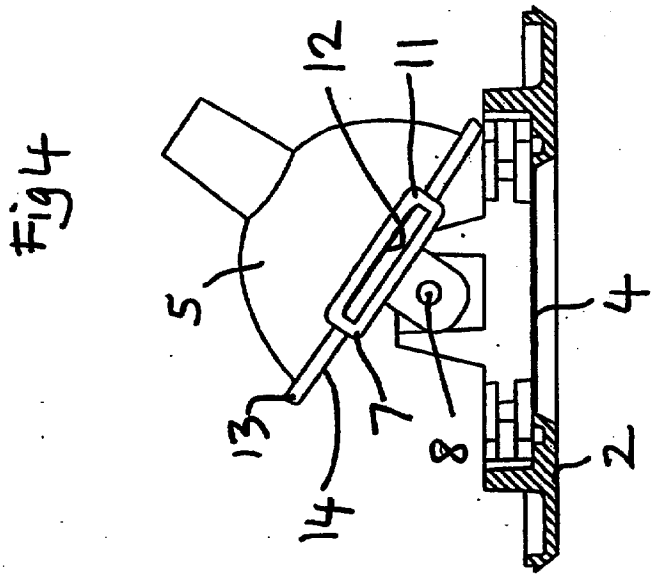


Fig4

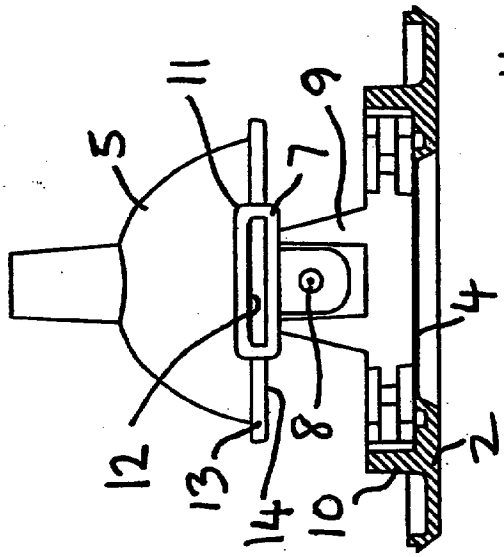


Fig3

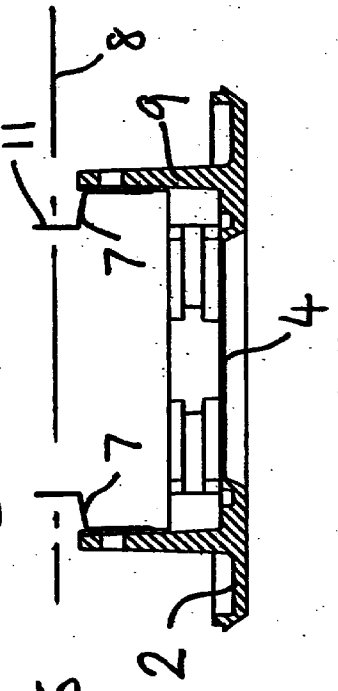


Fig5

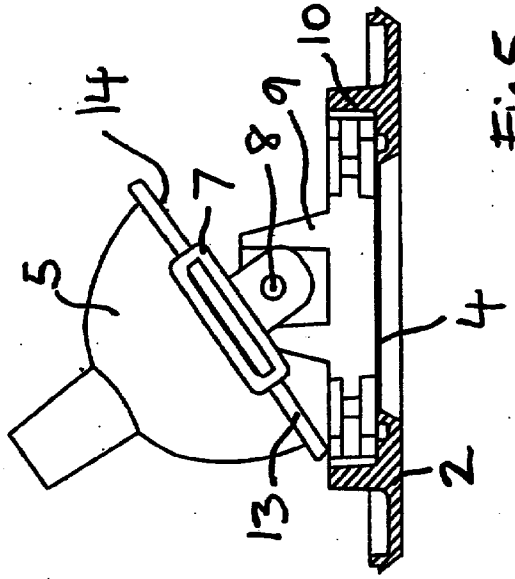


Fig2

RECESSED LIGHTS

The invention relates to recessed lights of the kind in which the light fitting is recessed in a support structure such as a ceiling, wall or floor and in particular to recessed lights in which a lamp (light bulb) is mounted for pivotal movement.

In a known ceiling light, a generally cylindrical housing fits into a circular opening cut into a ceiling. A bezel rim is removably received in the housing and includes an aperture providing a window for the beam of a lamp and support means for supporting a lamp above the window. The support means holds the rim of the lamp and permits a limited amount of adjustment of the beam of the lamp through pivotal movement about an axis aligned with the flat lens of the lamp. Lamps used in such lights have a focal point at about 15 – 20 mm from the lens but in the known light described above only a very limited useful range of pivotal movement is provided because of the large spacing between the pivotal axis and the window.

The present invention provides an improvement by reducing the spacing between the pivotal axis and the window. Accordingly, the invention provides a recessed light comprising: a generally cylindrical housing adapted to fit into an opening in a support structure; and a bezel rim adapted to support a lamp and to be removably received in the housing; wherein the bezel rim includes a window and support means for supporting a lamp on one side of the window; and wherein the support means is pivotally mounted on the

bezel rim about an axis spaced between the window and a lamp supported by the support means.

Embodiments of the invention are described below with reference to the accompanying drawings, in which:

Figure 1 is a vertical cross-sectional view through the components of a ceiling light showing how these components are fitted into an opening in a ceiling;

Figure 2 –4 are side views, partly shown in cross-section, of a bezel rim supporting a lamp; and

Figure 5 is a cross-sectional view of the bezel rim taken at 90° to the views of Figs 2-4.

In the ceiling light shown in Fig 1, a cylindrical housing 1 is fitted in known manner into a circular opening in a ceiling C. A front insert or bezel rim 2 is removably receiving in the housing and is retained in position by retaining springs 3. The bezel rim has a central aperture forming a circular window 4 and supports a lamp 5 which, when switched on, directs a beam of light through the window.

An improved bezel rim is shown in more detail in Figs 2-6 and includes support means for supporting a lamp 5 above the window 4 in the form of a pair of spring clips 7 mounted opposite one another on the bezel rim for pivotal movement about a horizontal axis 8 provided on upstanding parts 9 of an annular wall 10 of the bezel rim. The retaining springs 3 are not shown in Figs 2-5 may conveniently be mounted on the outer sides of the

upstanding parts 9.

As shown in Figs 2-5, the spring clips 7 have a flat rectangular part 11 which is formed with an elongate slot 12 for receiving the rim 13 of the lamp 5 which is of the type having a generally flat lens 14. The spring clips 7 and sufficiently resilient to allow replacement of the lamp.

As seen in Figs 2-4 the lamp and spring clips 7 can pivot as a unit about the axis 8 for adjustment of the angle of the beam through the window 4. The axis 8 is spaced above the window but below the lens 14 of the lamp. This greatly increases the useful range of pivotal movement of the lamp over which the beam is substantially directed through the window. A glass disc 15 shown in Fig 1 but omitted for clarity in Figs 2-5 is mounted in the bezel rim immediately above the window and held in position by a circular spring (not shown). Elastomeric seals are provided between the housing and the ceiling, between the bezel rim and the housing and between the glass disc and the bezel rim. The seals isolate the electrical components of the light from the environment of the room below it.

CLAIMS

1 A recessed light comprising:

a generally cylindrical housing adapted to fit into an opening in a support structure; and

a bezel rim adapted to support a lamp and to be removably received in the housing; wherein the bezel rim includes a window and support means for supporting a lamp on one side of the window;

and wherein the support means is pivotally mounted on the bezel rim about an axis spaced between the window and a lamp supported by the support means.

2. A ceiling light as claimed in claim 1 wherein the support means comprises a pair of spring clips pivotally mounted opposite one another on the bezel rim and adapted to releasably engage the rim of a lamp.

3. A ceiling light substantially as described herein with reference to the accompanying drawings.

Amendments to the claims have been filed as follows

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CLAIMS

1. A recessed light comprising:

a generally cylindrical housing adapted to fit into a circular opening in a ceiling;

a seal between the housing and the ceiling;

a bezel rim adapted to support a lamp and to be removably received within the housing;

a seal between the bezel rim and the housing;

a window in the bezel rim and a glass disc mounted in the bezel rim above the window;

a seal between the glass disc and the bezel rim;

support means on the bezel rim for supporting a lamp above the window and comprising a pair of spring clips pivotally mounted opposite one another on the bezel rim about a common axis spaced between the window and a lamp supported on the spring clips;

wherein each of the spring clips is adapted to releasably engage the rim of a lamp.

2. A recessed light substantially as described herein with reference to the accompanying drawings.

The Patent Office

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INVESTOR IN PEOPLE

Application No: GB 0004653.2 **Examiner:** Annabel Ovens
Claims searched: 1-3 **Date of search:** 31 July 2000

Patents Act 1977
Search Report under Section 17

Databases searched:

UK Patent Office collections, including GB, EP, WO & US patent specifications, in:

UK Cl (Ed.R): F4R (RFP, RFT, RMG)

Int Cl (Ed.7): F21S (8/02); F21V (19/02, 21/04, 21/30)

Other: Online: PAJ, EPODOC, WPI)

Documents considered to be relevant:

Category	Identity of document and relevant passage		Relevant to claims
X	US 5951151	(DOUBECK ET AL) see column 5 lines 37-43 and Fig. 5	1
X	US 5934788	(WOLFE) see column 3 lines 3-37 and Figs. 1-3	1
X	US 5562343	(CHAN ET AL) see column 8 lines 4-13 and 47-51, column 3 lines 26-30 and Figs. 1 and 3A	1
X	US 5130914	(BENGOCHEA) see column 1 line 63-column 2 line 9, column 4 lines 38-48 and Fig. 3	1
X	US 4745533	(SMERZ) see column 3 lines 3-11 and Fig. 5	1 and 2
X	US 3609346	(LUND AND KAUFMAN) see column 2 lines 31-50 and Figs. 3 and 4.	1

X	Document indicating lack of novelty or inventive step	A	Document indicating technological background and/or state of the art.
Y	Document indicating lack of inventive step if combined with one or more other documents of same category.	P	Document published on or after the declared priority date but before the filing date of this invention.
&	Member of the same patent family	E	Patent document published on or after, but with priority date earlier than, the filing date of this application.